

# GENERAL INTRODUCTION OF MINES



(a) **Name of Applicant of Mining lease** : M/s SHREE CEMENT LIMITED  
***Address*** : **P.B. No. 33, BANGUR NAGAR,  
BEAWAR, Dist. AJMER ( RAJ)  
305901**

***Phone Number*** : 01462 – 228101-06

***Fax Number*** : 01462 – 228117-19

***E-mail*** : [shreebwr@shreecementltd.com](mailto:shreebwr@shreecementltd.com)

***Website*** : [www.shreecementltd.com](http://www.shreecementltd.com)

Mining Lease No. : ML 38/ 2007

Mine code : 960/38CHG14027

(b) Name of Mine : **Shree Limestone mines M/s Shree Cement Ltd.  
BalodaBazar (CG)**

**Name & Address of owner : M/s. SHREE CEMENT LTD., P.B. No. 33, Bangur  
Nagar, BEAWAR–305901 (Raj.)**

# THRESHOLD VALUE OF LIMESTONE

- Threshold value of limestone means **limit** prescribed by IBM from time to time based on the **beneficiability and or marketability of mineral for given region and given time**, below which mineral obtained after mining can be discarded as waste.
- Rule 12(7) MCDR 2017 IBM shall review threshold value of mineral periodically in consultation with stock holders

# THRESHOLD VALUE OF LIMESTONE AS PER IBM

Parameter	Northern & western state	Southern states
CaO	34% (Min)	35% (Min)
MgO	4% (Max)	4% (Max)
SiO <sub>2</sub>	18% (Max)	18% (Max)
Alkalies	0.5% (Max)	0.5% (Max)

# LIMESTONE QUALITY PARAMETER FOR CLINKER FORMATION (MIN. REQUIREMENT)

Parameter	Use of 100% pet coke CV -8000Kcal	Use of coal CV- 3000- 4000Kcl
CaO	42.35 % (Min)	43.12% (Min)
MgO	1.8 % (Max)	1.8 % (Max)
SiO <sub>2</sub>	13.7% (Max)	13.7% (Max)
Al <sub>2</sub> O <sub>3</sub>	3.35% (Max)	3.35% (Max)
Fe <sub>2</sub> O <sub>3</sub>	1.9% (Max)	1.9% (Max)
Alkalies	1.1% (Max)	1.1% (Max)

POSSIBILITY FOR BLENDING OF LOW GRADE OF LIMESTONE FOR LIMESTONE PILE OF 42.35% CaO

<b>% of Qty to be used at threshold value 34% Cao</b>	<b>% of Qty of Cao required for blending</b>
10%	90% of 43.27% Cao or 77.3% CC
20%	80% of 44.43% Cao or 79.3% CC
30%	70% of 45.92% Cao or 82% CC
40%	60% of 47.91% Cao or 85.5% CC

POSSIBILITY FOR BLENDING OF LOW GRADE OF LIMESTONE FOR LIMESTONE PILE OF 42.35% CaO

<b>% of Qty to be used at threshold value 38% Cao</b>	<b>% of Qty of Cao required for blending</b>
10%	90% of 42.83% Cao or 76.48% CC
20%	80% of 43.43% Cao or 77.55% CC
30%	70% of 44.21% Cao or 78.94% CC
40%	60% of 44.25% Cao or 79.01% CC

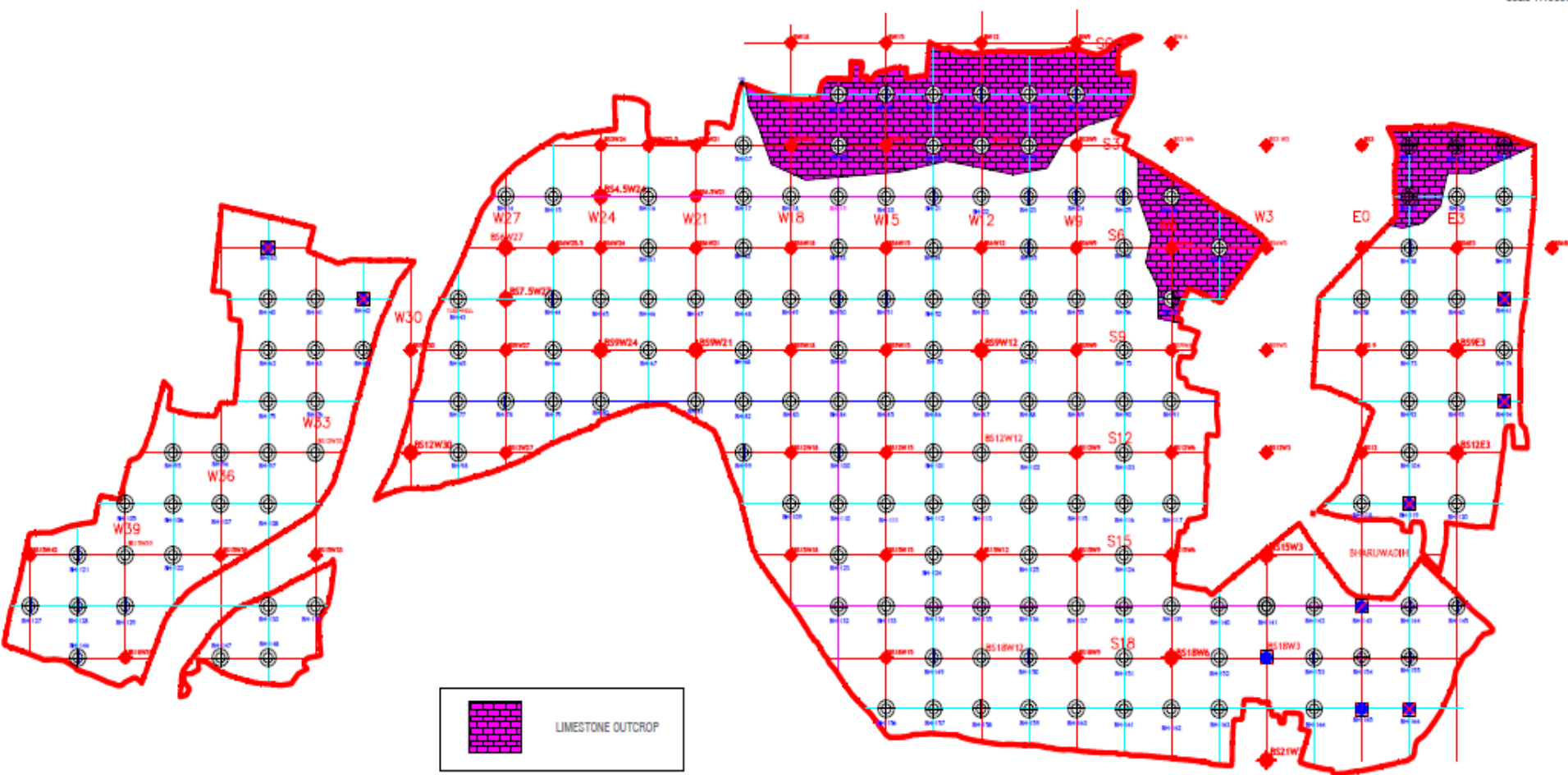
# EFFECT OF LOW GRADE LIMESTONE PILE ON CLINKERISATION

- Formation of hard clinker
- Power consumption for cement grinding increase
- Strength of clinker became low and clinker as well as cement quality will hamper
- % of (DFA) dry fly ash addition in PPC will reduce
- Limestone blending with lower % of Cao short life of mine.
- Due to excess silica & flux, there may be chances of kiln bricks infiltration (may be lead to lining failure)

# CONSERVATION OF MINERAL

- Limestone exploration under G1 category.
- Limestone boulders removed from waste soil and separately stacked
- Screening of waste soil from top bench through 8mm screen, which help to improve quality & conservation of mineral.
- Installation of (CBA) Cross belt analyser at dispatch belt. It regularly monitor instant quality in every 2 min which is not possible physically so it will help conservation of mineral
- Utilization of non-mineable zone due to statutory barrier along the Mine Lease area by shifting of crusher etc

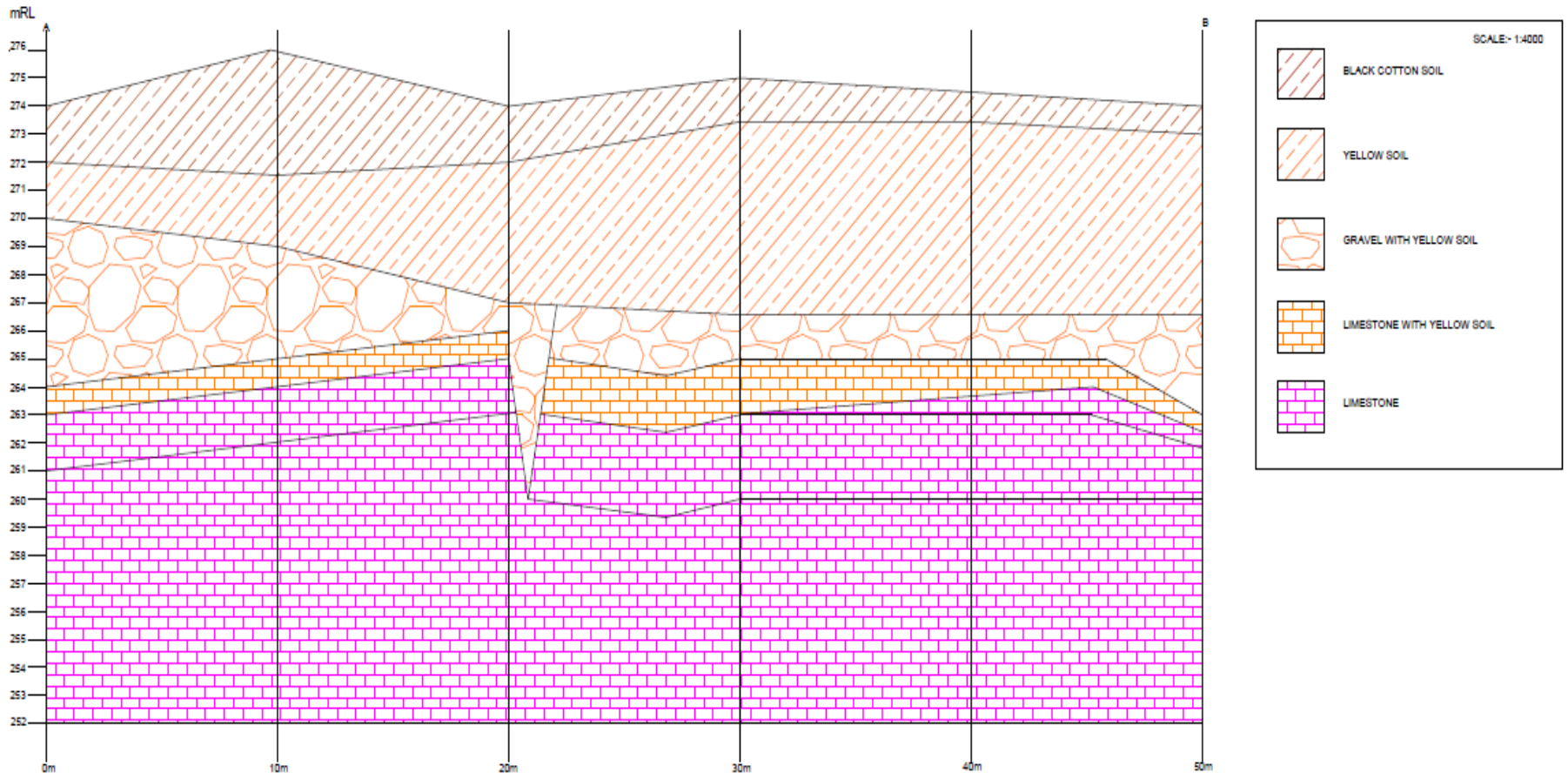




Limestone exploration under G1 category

# Lithostratigraphy of Mine Lease Area

## LITHOLOGY OF SHREE RAIPUR LIMESTONE MINE



# INTERBEDDED LIMESTONE BOULDER IN TOP BENCH



# BOULDERS SEPARATELY STACKED



# CROSS BELT ANALYZER (CBA)



# QLTY. MONITORING THROUGH CBA

Units	%	%	%	%	%	%	Units	%
Analysis Time	SiO2	Al2O3	Fe2O3	CaO	MgO	PCC	TM	MCC
11.14 15-Oct-2017	11.94	3.14	1.56	44.45	0.77	79.26	1884251.42	
11.16 15-Oct-2017	11.05	2.15	1.65	44.82	2.26	79.92	1884296.63	1.54
11.20 15-Oct-2017	12.50	3.23	1.51	44.11	0.66	78.64	1884344.37	4.54
11.22 15-Oct-2017	12.42	2.42	1.75	44.55	1.20	79.43	1884388.97	1.33
11.24 15-Oct-2017	12.08	2.95	1.06	44.66	0.04	79.63	1884435.34	2.42
11.26 15-Oct-2017	0.00	0.00	0.00	0.00	0.00		1884476.64	0.08
11.28 15-Oct-2017	13.56	2.62	2.22	42.31	2.74	75.43	1884476.64	
11.30 15-Oct-2017	13.67	4.14	1.79	41.38	2.49	73.77	1884524.25	5.53
11.32 15-Oct-2017	13.88	2.02	2.22	44.08	0.60	78.59	1884524.25	5.00
11.34 15-Oct-2017	14.69	2.24	2.33	42.61	1.76	75.97	1884574.51	1.21
11.36 15-Oct-2017	12.56	3.17	1.78	42.85	2.47	76.41	1884624.03	3.53
11.38 15-Oct-2017	12.81	3.07	1.82	43.07	2.34	76.80	1884670.60	4.97
11.40 15-Oct-2017	12.83	2.81	1.93	42.93	2.77	76.55	1884712.05	4.70
11.42 15-Oct-2017	12.64	2.08	1.83	44.41	1.21	79.19	1884762.06	5.57
11.44 15-Oct-2017	12.23	2.51	1.87	44.08	1.63	78.59	1884816.75	2.44
11.50 15-Oct-2017	0.00	0.00	0.00	0.00	0.00		1884867.33	3.28
11.52 15-Oct-2017	12.46	2.91	1.72	44.23	0.67	78.86	1884918.16	
11.54 15-Oct-2017	12.40	2.40	1.97	43.72	1.64	77.96	1884962.42	1.34
11.56 15-Oct-2017	12.94	3.33	1.85	42.93	1.68	76.95	1885013.90	3.28
11.58 15-Oct-2017	14.10	2.75	2.15	42.65	1.64	76.05	1885066.43	3.28
12.01 15-Oct-2017	16.12	3.10	2.51	40.75	1.80	72.65	1885116.16	3.30
12.02 15-Oct-2017	0.00	0.00	0.00	0.00	0.00		1885164.61	3.63
12.04 15-Oct-2017	13.07	2.84	2.10	42.13	3.46	75.12	1885164.61	6.95
12.06 15-Oct-2017	14.59	2.34	2.18	42.38	2.23	75.57	1885216.38	4.49
12.08 15-Oct-2017	14.15	3.68	2.09	41.70	2.24	74.35	1885266.82	4.45
12.08 15-Oct-2017	13.74	2.27	2.27	42.38	3.33	75.56	1885308.79	6.70
12.10 15-Oct-2017	13.02	2.70	2.14	42.65	2.74	76.05	1885358.46	5.90
12.12 15-Oct-2017	13.38	3.20	1.96	42.77	1.66	76.26	1885407.02	3.34
12.14 15-Oct-2017	13.01	1.99	1.81	43.62	2.10	77.78	1885453.17	4.32
12.16 15-Oct-2017	12.32	2.82	1.57	43.83	1.87	78.15	1885498.94	3.75
12.18 15-Oct-2017	13.33	3.05	1.76	41.91	3.19	74.73	1885541.76	8.42
12.20 15-Oct-2017	12.61	2.75	1.72	42.38	3.62	75.41	1885580.24	7.28
12.22 15-Oct-2017	12.93	2.98	1.97	43.60	0.90	77.74	1885622.67	1.81
12.24 15-Oct-2017	13.54	3.02	2.36	42.27	1.51	75.36	1885661.15	3.04
12.26 15-Oct-2017	13.22	3.97	2.32	41.30	2.83	73.64	1885704.02	5.70
12.28 15-Oct-2017	13.36	2.68	2.52	43.25	1.88	77.12	1885750.12	2.17
12.30 15-Oct-2017	13.43	2.87	2.40	42.71	1.56	76.15	1885800.66	3.15
12.32 15-Oct-2017	13.78	2.66	2.66	42.05	3.85	74.99	1885842.06	7.74
12.34 15-Oct-2017	12.68	1.83	2.01	42.50	4.26	75.77	1885885.41	5.76
12.36 15-Oct-2017	11.77	2.34	1.62	43.45	3.81	77.53	1885930.73	7.56
12.36 15-Oct-2017	11.77	2.16	1.62	43.68	2.18	77.89	1885976.26	4.29
12.38 15-Oct-2017	11.62	3.03	1.67	43.94	0.04	78.35	1886016.39	0.09
12.40 15-Oct-2017	13.39	3.17	2.91	42.94	2.08	76.57	1886054.58	4.19
12.42 15-Oct-2017	12.53	3.31	1.81	42.55	1.85	75.87	1886094.48	3.72
Average	13.76	2.96	2.08	42.55	1.40	2.52	3629.89	1.77
Standard Deviation	1.50	0.61	0.42	1.40	0.86	4.36	1886054.68	8.76
Maximum	17.50	7.40	3.71	46.14	0.00	68.77	1873541.83	8.01
Minimum	0.00	0.00	0.00	0.00	0.00			0.01
Count	287	287	287	287	287	285	287	285

Alerts  
 11:44 15-Oct-2017  
 Time Name  
 More

● DNA running (Current Value)

# CONCLUSION

- If any **feasible beneficiation of limestone technology** available, we can adopt the same.
- **Low lime cements such as Belite (C<sub>2</sub>S) and Sulfoaluminate (C<sub>4</sub>A<sub>3</sub>S) type** have been used on a commercial scale particularly in countries such as China, Japan and Russia though it is costly
- **Use of Pet coke is banned from Nov.17 near NCR** area at state Rajsthan , Haryana & UP. It will more difficult for industry. As firing with pet coke base limestone pile -42.35% Cao or 75.6% CC and firing with coal limestone pile -43.12% Cao or 77.01%CC
- Presently no feasible technology available to remove silica from limestone as **requirement of thousands tons production per day.**
- In our opinion **Threshold value should not be lower than 34% Cao** in present situation.

**THANK YOU**